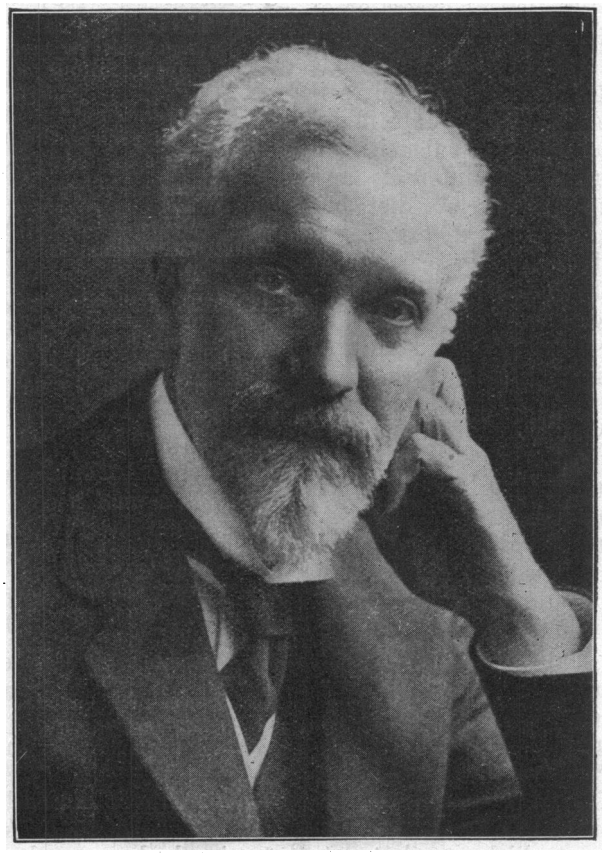
Obituaries

Archibald Byron Macallum, M.A., M.D., Ph.D., Hon. D.Sc., LL.D., F.R.S., F.R.S.C.

Dr. Archibald Byron Macallum died at his home in London, Ont., early on the morning of April 5th, after a year's illness. In Dr. Macallum Canada loses one of the most distinguished scientists she ever produced, a man outstanding all over the world in the field of biochemistry. His great achievements were never spectacular, but among the scientists of the nations he was recognized as a leader.

Dr. Macallum was born in 1858 on a farm in Westminster township, Ont., the son of Alexander Macallum, who came to this country from Scotland in 1830 and pioneered in what was then bush country near London. Owing to the fact that vital statistics were not systematically recorded until the year of Confederation (1867) the exact date of his birth is unknown. He had 6 sisters and 5 brothers, two of whom became doctors. He was educated in the township schools and in the high schools of London. He obtained a first-class teacher's certificate and went back to Westminster township to take a rural school, in order to earn money to put himself through university. Even as a boy in his 'teens he was ambitious to obtain a good education.



Archibald Byron Macallum

Attending the University of Toronto, he graduated with an arts degree in 1880 and won the silver medal for natural sciences, demonstrating early the tremendous ability in the field of research which was later to secure him a lasting international reputation. He then went into teaching high school in the town of Cornwall. There he met a young lawyer, James Whitney, and established a friendship that lasted throughout the lifetime of the man who later was to become Sir James Whitney, for a long time Prime Minister of Ontario. Much of the educational legislation that was passed during the Whitney régime at Queen's Park was influenced by the Premier's friendship with Dr. Macallum, and the cause of higher education was immeasurably benefited by this happy association.

From 1880 to 1883, while he was engaged in high school teaching, he was collaborating with the late Prof. R. Ramsay Wright, Prof. J. P. McMurrich, and the late Dr. Thomas MacKenzie, of Toronto, on the study of the anatomy and physiology of the catfish. He discovered that the pancreas, which was hitherto believed to be non-existent in this fish, was embedded in the liver.

In 1883 Dr. Macallum returned to the University of Toronto, this time as a member of the faculty and Lecturer in Biology. He obtained his medical degree in 1889 and his master of arts degree in 1889 and his master of arts degree in the same year. A man of wide culture, he was a voracious reader and never confined his active mind to one field of study. He obtained his degree of doctor of philosophy from Johns Hopkins University in 1888. From 1890 to 1908 he was Professor of Physiology at the University of Toronto, and from 1908-16 Professor of Biochemistry in the same institution, where he broke new ground through his intelligent research in his field. His work might be said to be in the determination of fundamental principles, and the general advancement of science, but particularly with relation to the chemistry of blood and tissues.

Ordinarily a list of degrees may not be a true measure of a man's life work, but in the case of Dr. Macallum they were all deserved through hard work and steady application. He was a Fellow of the Philadelphia College of Physicians; a Fellow of the Royal Society of Canada; local secretary of the British Association for the Advancement of Science in 1897. He was the first University of Toronto graduate to be elected to the Royal Society of England (1906); a member of the Royal Philosophical Society of Glasgow. He held honorary degrees from Aberdeen, McGill, Toronto, Trinity College, Dublin, and Yale.

He was appointed Herter Lecturer in New York in 1918, and Hatfield Lecturer before the College of Physicians in Philadephia in 1917.

In 1917, at the time of the Union Government, when Sir Robert Borden was Prime Minister, the late Hume Cronyn was member of Parliament. It was Mr. Cronyn who first urged the necessity of research on a national scale, and a special committee of Parliament was appointed, which later brought in a series of recommendations, one of which was that a national research council should be established. It was natural, in view of his record, that Dr. Macallum should be appointed the first chairman. He served in this capacity for three years, and he must receive a large measure of the credit for the success which the foundation has since received. He established it solidly on sound scientific principles, and his work in this connection will live for generations after his death.

To the advancement of general education, as we have said, he contributed through his association with

Sir James Whitney. He had much to do with the framing of the organization bill of the University of Toronto which was put through the Legislature in 1905. This was a revision of the charter, and there was much opposition to it at the time. In those days the Government was not financially interested in higher education as it is today. The university was almost paying its way, the deficits running around $30,000 a year. However, expansion was required and governmental financial assistance was necessary, and Dr. Macallum's efforts bore fruit in this direction.

In 1897 Dr. Macallum was chairman of the local committee of the British Science Association during its meeting in Toronto. He was also the representative of the Ontario Government on the Board of Trustees of the Toronto General Hospital from 1907 to 1913.

In 1920 Dr. Macallum went to McGill University as Professor of Biochemistry, retiring from active work in 1928. His ability and international reputation were recognized in 1921 by the Rockefeller Foundation when he was sent as visiting professor to the Peking Union College, where he rendered distinguished service. In 1906 he visited South Africa, where he attended the convention of that year of the British Association for the Advancement of Science. He attended in 1932 the International Physiological Congress in Rome. Not satisfied with listening merely to papers and lectures, he embarked on a research expedition of his own down the Mediterranean coast.

During the past forty-five years his studies covered a large number of subjects. In 1888 he reported the discovery of the origin of hæmoglobin from the nuclear chromatin in embryonic red cells. In 1892 he demonstrated the presence of "masked" iron in the chromatin of every cell, and proposed the generalization that as hæmoglobin is derived from chromatin the latter must have respiratory powers. Between 1898 and 1908 he demonstrated by microchemical methods the exact localization in cells, animal and vegetable, of calcium, potassium, chlorine and phosphoric acid, and presented the results he had obtained in communications to the Royal Society of London. This was followed by a demonstration of the relation of potassium to adsorption in the cell. After this, Professor Macallum carried out a very interesting investigation on the relation between the inorganic salts of sea water and those in the tissues of jelly fishes, which led to a formulation of the origin of the salts in the blood plasma of vertebrates. In the lower marine invertebrates, which have a circulation not closed off from the sea water, the circulatory fluid is sea water. In those invertebrates with a closed circulation, which have been denizens of the sea since the Silurian period, the circulatory fluid is practically sea water of today. In vertebrates the inorganic salts of the blood are in a concentration less than one-third of the concentration of those same elements of the sea water of today, but by ranging the concentration of the sodium, potassium, calcium and magnesium in ratios, with sodium as 100, there was revealed a similarity to sea water, with the same elements, except in regard to magnesium. From this followed the generalization that the salts of the blood plasma in their concentration are those of the sea water of the Cambrian or Silurian period. In that age the concentration of the salts in the sea must have been less than one-third of what it is in the ocean of the present day, and also the proportion of magnesium was greatly less than it is now. The factor in maintaining this ancient ocean concentration in the blood plasma is to be found in the kidneys of vertebrates, which rigidly control the inorganic composition of the blood plasma. The kidneys have rendered it possible for vertebrates to change their environment without changing the inorganic composition of their blood, whereas amongst invertebrates such a maintenance of uniformity in the blood plasma is not possible, and, consequently, a high degree of evolution amongst invertebrates is possible. This led to a study of the inorganic composition of the living cell, and it was found that the proportions of the elements, sodium, potassium, calcium and magnesium, are utterly unlike those found in the blood plasma. Hence the conclusion that the organic composition of the cell harks back to a more remote geological age, to a time when the organism was unicellular, and when there diffused into it the salts of its environment. On the other hand the animal cell represents in its organic composition the sea water of a period much earlier than the Cambrian. Therefore it may be stated that in the blood plasma we meet with sea water of the Cambrian period and in the cell itself a sea water of a date many millions of years earlier.

After his retirement from McGill, with the title of Emeritus Professor of Biochemistry, Dr. Macallum lived in London, Ont., but his days were never idle. He had an office in the Medical School building which he visited daily. There he consulted members of the staff and helped students with difficult research problems. In such high esteem was his opinion held that he was constantly being referred to. At the same time he took a keen and intelligent interest in current events, at home and abroad. He was a student of the body politic as well as a student of the human body. His years of retirement did not dull his interest in life; rather, they sharpened it if anything.

Dr. Macallum's one physical recreation was golf. He was an ardent and enthusiastic golfer, back in the days when men in plus-fours, swinging their awkward-looking clubs, were laughed at. A member of the London Hunt and Country Club, he played golf until the last few months of his life. He was a member also of the University Club of Montreal and the York Club, Toronto.

While never in public life himself, devoting his entire time to research, he had many close friendships with distinguished men besides Borden and Whitney, the late Sir George Foster, Hon. H. H. Stevens, now Minister of Trade and Commerce, and Rt. Hon. R. B. Bennett.

His old friend, Prof. J. P. McMurrich, gives us the following picture of a strong character and a remarkable personality.

"Professor Macallum was tall, lank, rugged and somewhat 'dour', of the Highland Scot type and with all the Scot's pertinacity. To whatever interested him he gave serious consideration, decided upon what seemed best, and then fought for that uncompromisingly and with all his energies. To his opponents he was anathema, but to his friends he revealed himself as a good companion, fond of congenial company, fond of good cheer, fond of a good story well told, fond of a game of golf, and fond of good poetry, for which he had a most retentive memory. One can visualize him testing the acoustic properties of an old Greek theatre, standing upon the stage and declaiming Matthew Arnold to his companions opposite him on the topmost tier of the amphitheatre. With congenial companions his dourness vanished."

Dr. Macallum is survived by his widow and three sons, Dr. A. Bruce Macallum, Dean of the Medical School of the University of Western Ontario; E. N., president of the Synthetic Drug Company, of Toronto, and A. D., research chemist in the DuPont plant at Niagara Falls, Ont.

Dr. William Walter Beattie, of Montreal, was instantly killed in a motor accident near Biggleswade, Bedfordshire, England, on April 13, 1934. His motorcar mounted the footpath, jumped the ditch and a hedge, and stopped upside down, while Dr. Beattie was thrown into the air, his neck being broken as he fell.

Dr. Beattie graduated from the Faculty of Medicine of McGill University in 1920, after completing his studies in the Faculty of Arts. One year after graduation he

was added to the medical faculty staff as assistant curator to the medical museum. In 1926 he was appointed lecturer in bacteriology. A brilliant student, he continued his studies both in Montreal and in New York City. Last fall he went over to London to do special work and was studying at Queen Charlotte's Hospital.

Dr. Beattie was a native of Montreal, and was forty years of age. His father, the late John Beattie, came from Scotland. The family survivors are his mother, Mrs. John Beattie; two brothers, Rev. D. Beattie, who is minister of a parish in Scotland, and James R. Beattie, and one sister, Miss Jessie Beattie, both the last of Montreal.

Dr. Joseph Esdras Beaudet died on February 28, 1934, at St.-Jean Deschaillons at the age of 60. He had studied at the Quebec Seminary and Laval University where he graduated in medicine in 1898. He then practised at Notre-Dame-du-Lac for five years and finally settled in his native town for the rest of his life.

Dr. Achille Besner, of Valleyfield, coroner for the district of Beauharnois, died suddenly on February 15, 1934, from angina pectoris, at the age of 62. He took his degree in medicine at Laval University, Montreal, in 1892.

Dr. William Black died on April 3, 1934, following an attack of cerebral hæmorrhage. He was born in Bruce County, Ont., spent his boyhood at Morden, Man., and graduated from the Manitoba Medical College in 1903. During the war he served as Medical Officer with a Winnipeg regiment.

Dr. Frederick Graham Brien, of Elphinstone, Man., died on December 30, 1933, in the Winnipeg General Hospital, after a brief illness, at the age of 71 years. He was born in Lindsay, Ont., and attended school there and later the Normal School at Ottawa. He came west as a young man and was principal of schools at Birtle and Selkirk. He then took up the study of medicine and graduated in 1894 from the Manitoba Medical College. He practised at Dugald, Douglas and Winnipeg, Kerrobert, Sask., Peachland, B.C., and lastly at Elphinstone.

Studious by nature and a sound classical student, Dr. Brien bore the reputation among his friends of being one of the best-read men in the province, though his modesty and unassuming nature prevented a wider recognition of his gifts. He was a sound practitioner and a delightful companion.

Dr. Félix Cornu died in Montreal on January 29. 1934, at the age of 68. He had lived in Buckingham for about 20 years. He was a graduate of Victoria University Medical School in 1887.

Dr. Herbert Ernest Cumming died at Hereford, England, on March 20, 1934. Dr. Cumming graduated in medicine from McGill in 1913 and was one of the first to go overseas with the McGill Corps. He was a graduate also of the Vankleek Hill Canadian Institute and taught school in Ontario and Saskatchewan for a few years. While at the University he took a prominent part in its athletic activities and among other things played soccer. He belonged to the McGill Rifle Club and boxing class.

Dr. Frederick Charles Delahey, of Pembroke, Ont., died on February 8, 1934. He was born in 1870 and was a graduate of the University of Toronto (1895).

Dr. Cummins Van Norman Emory, of Hamilton, a homœopathic physician, not in practice, died on March 16, 1934, in Florida. He was born in 1850 and was a graduate of the Homœopathic Hospital College of Cleveland (1879). Dr. Emory was a former Dominion Secretary of the Royal Templars of Temperance.

Dr. L. A. Genest died at the General Hospital of Quebec on February 10, 1934, at the age of 70. He was born at St-Henri-de-Lévis. He graduated from the University of Montreal in 1892 and practised until 1903 at Sherbrooke, Que., and since then at Legal, Alta.

Dr. William Hall, the oldest resident practitioner in Saskatchewan, died at Fort Qu'Appelle December 31, 1933. He was born on May 25, 1856, in Norfolk County near Waterford, Ont., of English parentage, from Yorkshire. He was educated at Woodstock College and Queen's University and graduated in 1883. Following graduation he came west, opened a practice at Fort Qu'Appelle on June 3, 1883. The following year he married Miss Jane Webster, of London, Ont., a descendant of an old United Empire Loyalist family who moved from New York State to south-western Ontario in 1776. To them was born one child, Clayton, who afterwards graduated in arts and medicine from Toronto University, served with distinction overseas, and on returning home took up his father's practice in Fort Qu'Appelle. The year following Dr. Hall's marriage saw the North-west Rebellion. Dr. Middleton established his headquarters at Fort Qu'Appelle, and Dr. Hall gave medical care to these forces.

For many years Dr. Hall had been the oldest resident practitioner in the Province of Saskatchewan, having practised there nearly fifty years. During this period he served as physician to the Indians on various reservations. He had a very keen interest in the health of the Indians, and his personal knowledge of them was of great assistance in the recent research into the health of Indians of the Qu'Appelle Valley, reported in 1928. Dr. Hall was recognized by his confrères as an outstanding practitioner, and during his long period of medical service he continuously retained the confidence and respect of his patients. His fellow practitioners throughout the province made him a life-member of their Association in 1932. In 1932, also, the citizens of Fort Qu'Appelle and district honoured him at a gathering at which was presented an illuminated address, signed by all organizations and public bodies in the community. He took a keen interest in the public affairs of the community, and lent his support to all efforts for the welfare of the community. He served as Overseer of the Village of Fort Qu'Appelle; was appointed Honorary President of the Golf Club, Curling Club, and Great War Veterans' Association. His hale manner and kindly presence will be greatly missed by his friends, and especially by the sick, in whose service his generosity and kindness knew no end. R. G. FERGUSON

Dr. Marion Hansford. One of the first woman doctors in Montreal, Dr. Marion Hansford, for nearly a quarter of a century school medical inspector, died suddenly recently at the Homœopathic Hospital. Stricken while at work at the Iona Avenue school, she was taken to the hospital where she died three hours later.

Before McGill University admitted women to the study of medicine, Dr. Hansford followed her course at the medical college then attached to the University of Bishop's College, graduating with an M.D. degree in the late "nineties". She was among a distinguished group of Montreal women who received their medical training there. She was in general practice for some time before engaging in special work such as being in charge of the Baby Welfare Camp on Fletcher's Field in 1919. She was a native of Lanark, Ont.

She is survived by a brother and sister in Vancouver, William and Miss Byrd Hansford. The late Col. Hansford, of Winnipeg, was a brother.

Dr. Ronald Levesque, of Montreal, died on January 14, 1934, at the age of 47, after a short illness. He was born in Montreal, graduated from Laval University,

Montreal, in 1912, and then went to Paris. He devoted himself to research.

Dr. Dick Allison Taylor died in Lethbridge, Alta., on March 27, 1934, at the age of fifty-eight years, after a considerable period of ill-health.

Graduating from McGill University in 1901, he practised for three years in his native province of Nova Scotia, coming to Alberta in 1905, where he had since resided. For many years he devoted himself to eye, ear, nose and throat work. He is survived by his widow and two children.

Dr. Charles Ernest Tran, Kamsack, Sask., died from a stroke, on March 23, 1934. While not in the best of health for some time, Dr. Tran had been actively engaged in his practice and had been attending a patient when seized.

Dr. Tran was born on January 29, 1877, at Barrie, Ont. He attended school there and was a graduate of Western University at London, 1912. He had practised at Kamsack for more than twenty years, and was mayor from 1914 to 1916, 1919, 1921, 1923, and 1926. Dr. Tran was the Independent nominee for Pelly constituency for the coming elections and served in the legislature as Progressive leader, but dropped out of politics in 1929. He was a member of both the Masonic and Odd Fellows' lodges. He was a World-War veteran, serving with the Canadian Medical Corps from 1916 until demobilization. His wife and two children, Charles Garfield, and Shirley Angeline, survive him.

Dr. John James Wade, of Coe Hill, Ont., was found dead in his office on March 24, 1934. He was apparently in his usual health the day previous. Dr. Wade was born in 1881 and graduated from Queen's University in 1906.

News Items

Great Britain

Princess Elizabeth Hospital for Children, Shadwell, London, E.I. — On February 16th, Professor Leonard Findlay presided at a lecture on "Our animal friends as patients" by Sir Frederick Hobday, C.M.G., F.R.S.E., Principal of the Royal Veterinary College and Hon. Veterinary Surgeon to the King. The address was fascinating, both in matter and delivery, interleaved with humour and pathos, and well illustrated with lantern slides and cinematograph films. Among the diseases, glanders, tuberculosis, and foot-and-mouth disease were discussed, and interesting examples were shown on the screen of artificial legs, eyes, and teeth in dogs. The lecturer spoke at some length of the modern humane method of rendering animals unconscious by electricity before slaughtering them in the usual manner. Electricity, he said, was also used for the purpose of anæsthetizing animals which have to undergo surgical operations. A vote of thanks, proposed by Dr. E. W. Goodall, and seconded by the Matron, was heartily carried by a large and enthusiastic audience.

W. R. BETT

Dr. John Cameron, formerly Professor of Anatomy at Dalhousie University, Halifax, N.S., has just published an important book, representing a lengthy and painstaking research. It is entitled "The Skeleton of British Neolithic Man"* and is dedicated to Sir Arthur Keith *veteris amicitiæ non immemor.* So far as the author could ascertain, the subject had not previously been dealt with in a systematic manner. The study is based largely upon the extensive material of prehistoric and Anglo-Saxon age which is housed in the museum of Royal College of Surgeons, London, but to some extent on remains from Minorca and Egypt. In this way it was possible to undertake a comparative study of prehistoric man in two widely separated regions of Europe. The book first describes the neolithic remains of the cranium and other bones discovered hitherto in England, and then goes into considerable detail in regard to certain individual bones and the skeleton as a whole. There are illuminating chapters on The Skeleton of British Neolithic Man, compared with Neolithic and Copper Age Skeletons from the Mediterranean Basin, and The Relation of the Prehistoric Inhabitants of Britain to the Present-day Population of that Island and of Europe in General. As there are still gaps in our knowledge regarding the anatomy of prehistoric man in Britain, the author hopes that his work may prove an incentive to further study. Professor Cameron's book is an erudite and valuable contribution to a subject which has interest not only for the pure anatomist but for the ethnologist and medical man as well.

* The Skeleton of British Neolithic Man. John Cameron, M.D., D.Sc., F.R.S.S.Edin. and Canada. Illustrated. Price 15/-. Williams and Norgate, Ltd., 28-30 Little Russell Street, London, W.C.1., 1934.

Sir Robert McCarrison.—The governing body of the Arnold Flinker and Julius Wagner-Jauregg Foundation of Vienna for research on goitre and cretinism has awarded the Foundation's prize of 2,000 Austrian shillings to Major-General Sir Robert McCarrison, I.M.S., for his researches into the etiology of goitre, upon which he presented a report at the second International Congress on Goitre, held in Bern last summer. As this prize had never before been awarded to a foreigner the statutes had to be altered for the purpose of recognizing Sir Robert McCarrison's work.

Alberta

According to the Honourable G. Hoadley, Minister of Health, the Provincial Legislative Commission on State Health Insurance does not propose to spend ten million dollars on a scheme to be put into operation under present conditions. An adequate scheme has been drafted, and how this is to be put into operation is for the Provincial Legislature to decide.

In a Bill to amend the Public Health Act, now before the Provincial Legislature, there would be a new five-year plan, under which powers of Boards of Health will be extended in order to provide "state medicine" on a modified scale. This new Bill would give the Board of Health in any city or health district which has within its area any city or town, the power to make provision for supplying medical, dental and surgical services, to any persons or class or classes of persons within the health district. In particular, this power will apply to the care of the health of school children within the school district, children of pre-school age, and expectant mothers. This Bill would empower the Board of Health to employ physicians, dentists, and nurses, and to enter into agreement with a town-school district, whereby the Board of Health undertakes the provision of the services mentioned which the School Board is empowered or is under a duty to provide by the School Act of 1931. Every agreement between a Health Board and School District is to be for a period of at least five years, and may be terminated upon a year's notice being given by any party, after a resolution passed by the party desiring to end the agreement has been ratified by the electors.

By a recent order-in-council enacted by the Provincial Government, local health authorities have been given the power to compel tuberculous persons to go to a hospital, and to remain there, even if the patient desires